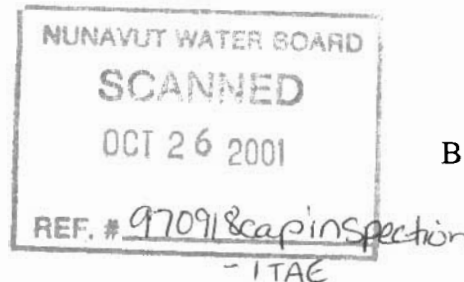




DIAND Nunavut District
Box 100
Iqaluit, NT
XOA OHO

September 18, 1997

Mr. Timoon Toonoo
Senior Administrative Officer
Hamlet of Cape Dorset
Cape Dorset, NT
XOA OCO



Your file: Votre référence

Our file: Notre référence

B9545-5-N5L3-1634 (assigned)



Dear Mr. Toonoo;

Water Management Inspection; September 16, 1997

1. Please find enclosed a copy of the inspection report prepared as a result of the inspection carried out on the Hamlet of Cape Dorset on September 16, 1997.
2. The main outstanding issue relates to the matter of the Hamlet obtaining a water licence. The Hamlet had applied a number of years ago and the reason why the licence was not issued was because not enough information was provided (mainly in the form of drawings for the waste disposal facility). Now that a new waste disposal site is under construction, site plans have been developed and should be provided to the Nunavut Water Board..
3. The Nunavut Water Board is now responsible for issuing all water licences in Nunavut and may request such information so as to proceed with the licensing process.
4. In terms of operational issues, there are some comments that I would make. A more detailed discussion is provided in the inspection report, but to summarize:
 - ☐ warning signs should be placed at the water supply and waste disposal facilities;
 - ☐ substantial effort and vigilance will be required to ensure that sufficient drainage be provided to spring runoff water that will flow through the valley where the solid waste disposal site is located and the sewage lagoon is being constructed;
 - ☐ a plan to deal with hazardous wastes is needed;
5. All of these suggestions are likely to be requirements of any water licence issued in the future.

.../2

6. The results of the water samples collected will be forwarded once analysis is complete.
7. If you have any questions with this inspection report, please do not hesitate to contact this office.

Sincerely,



Paul Smith
Water Resources Officer
Nunavut District

- cc.
- Nunavut Water Board, Gjoa Haven
 - DIAND Water Resources, YK
 - MACA, Iqaluit (Capital Projects Officer)
 - Public Health, Iqaluit (Nicole Ritchie)

MUNICIPAL WATER USE INSPECTION FORM

D. September 16, 1997 COMPANY REP.: Adamie Curley
LICENSEE: Hamlet of Cape Dorset LICENCE #: Unlicensed (NSL3-1643 assigned)

WATER SUPPLY

Source (s): Ice Lake Quantity Used (to date): ~ 30,000 m³/year
Owner/Operator: Hamlet (estimate or actual)

Indicate: A. - Acceptable U. - Unacceptable N/A - Not Applicable

Intake Facilities: Not Insp Storage Structure A Treatment Systems A Chem. Storage A
Flow Meas. Device A Convey. Lines Note 1 Pumping Stations A

Comments:

WASTE DISPOSAL

Sewage Sewage Treatment System (primary, secondary or tertiary) Primary - lagoon undersized
Natural Water body to ocean Continuous Discharge (land or water)
Seasonal Discharge Wetlands Treatment N/A Trench

Solid Waste: Owner/Operator: Hamlet
Landfill Burn & Landfill Other

Indicate: A. - Acceptable U. - Unacceptable N/A - Not Applicable

Disch. Quality N/A Decant Structure Note 1 Erosion A
Disch. Meas. Dev. N/A Dyke Inspection N/A Seepages N/A
Dams, Dykes Note 2 Freeboard N/A Spills N/A
Construction Note 3 O & M Plan N/A A & R Plan N/A
Periods of Discharge: Spring/Fall Effluent Discharge Rate: 3 l/s

Comments:

FUEL STORAGE

Owner: Operator Condition of Tanks
Berms & Liners Water within berm: Evidence of Leaks:
Drainage Pipes Pump Station and Catchment Berm
Pipeline Condition Not Applicable:

SURVEILLANCE NETWORK PROGRAM

Samples Collected: (Hamlet) N/A
(DIAND) Treated water, Sewage effluent
Signs Posted: SNP N/A Warning N/A
Record & Reporting N/A, but Hamlet keeps detailed records of water delivery
Geotechnical Inspection: N/A

Non-Compliance of Act or Licence: Hamlet is unlicensed. Hamlet applied in 1994, but process has been stalled for various reasons. (primarily due to the lack of drawings for the waste disposal site; these drawings never existed in the first place).

Page 2 attached Yes No

Licensee Representatives Title
N/A
Licensee Representatives Signature

PAUL SMITH
Inspectors Name
Paul Smith
Inspectors Signature

Inspection Report

Hamlet of Cape Dorset
Unlicensed (N5L3-1634 assigned)

September 16, 1997

Water Supply

The community obtains all of its water from Tee Lake. There is a pumphouse at the intake. Water is heated and pumped downhill via an insulated pipeline. The water is treated and stored in an insulated tank. At the time of the inspection, there was a fuel leak in progress in the treatment plant. Diesel fuel for the reheat furnace had overflowed the spill pan and was spilling on the floor. It had been occurring for no more than ten minutes. Power to the furnace was cutoff and the fuel flow stopped. Apart from this, the plant is neat and tidy. The pumphouse at Tee Lake was not inspected due to time limitations. However, past inspections noted that no warning signs were posted at the supply.

Note 1

The pipeline froze once last winter and water from the alternate water supply (Dead Dog Lake) had to be used.

In 1996, the Hamlet of Cape Dorset used 29,355 m³ of water.

Waste Disposal - The Hamlet is in the process of relocating the entire waste disposal facilities to a valley adjacent to the old waste disposal site and further away from the community. At present the solid waste disposal site has been relocated, but work continues on completing the sewage lagoon.

Solid Waste - the current solid waste disposal facility has only been in use for 1 month. It has an expected life span of 3 years. It is located in a valley that contains significant granular resources. The old waste disposal site was abandoned 2 years ago (1995) and was relocated to this new valley. This intermediate site was used for 2 years before it reached capacity (1997). These 2 abandoned sites have been covered with granular material. Mr. Adamie Curley, Asst. Director Housing and Municipal Works, indicated that approximately 0.5 m of cover material had been placed on these sites. The 'original' site, which was still being used during the 1995 inspection, also consisted of the waste oil disposal area, the bagged sewage disposal area and the severely undersized sewage lagoon. With the exception of the lagoon (see below) all sites had been covered. However, some areas appearing to be oil stained, were still visible.

As more granular material excavation takes place, the current dump site will continue to expand (but will also be covered progressively) up the valley.

The bulky waste metal site is spread out at a site along the shore. It was placed there to facilitate its loading onto a barge to be back hauled to scrap dealers in the south. This never happened and there is no control at this site. Hazardous materials that are generated (batteries, paint, etc.) are deposited here in an uncontrolled manner.

Notes 2+3

Sewage Wastes - At present sewage is still deposited in an undersized lagoon at the 'original' waste disposal site. A new sewage lagoon was constructed in 1995 and was used briefly in the fall and early winter. Public Health had some concerns with the facility and advised the Hamlet to revert to the old lagoon. In the spring of 1996 runoff threatened to wash out the facility and steps were taken to allow the controlled discharge of the lagoon cells. In 1997 a similar situation occurred once again which resulted in substantial portions of the berms of the 2 lower cells to wash out. The tiered 3-cell concept has been modified to a 2-cell lagoon in which the large upper cell now becomes the lower cell. The upper cell has yet to be built as granular material is still being extracted from this area. Current plans have the upper cell being built next summer and the facility being used in the fall of 1998. The area in which the upper cell will be built is not nearly as steep as the previous 2 lower cells.

Note 4

Additional material has been added to the decant berm at the existing sewage lagoon to decrease the filtration rate and increase the retention time.

The solid waste disposal facility (both the new and recently abandoned ones) are located further up the valley from the sewage lagoon (under construction).

The main concern with the location of the waste disposal site is the amount of runoff that flows through the area in the spring time. Remnants of a diversion ditch were evident, but with excavation and runoff activities, the ditch has filled in adjacent to the solid waste disposal areas. A substantial effort will have to be made on a yearly basis to ensure that all runoff will be adequately diverted and kept from entering both the dump and sewage lagoon.

At present the Hamlet does not hold a water licence. At the time when an application was made (1994) the NWT Water Board halted the licensing process due to a lack of information (primarily the provision of as-built drawings for the solid waste disposal site). As these drawings never existed in the first place (it was not an engineered site when it was constructed) the situation now exists such that there is significant on-going development of the waste disposal facilities in the community that is being undertaken without the benefit of a water licence.

End